

Segment Software Programmer's Manual

Netscape Enterprise Server Data Segment (NSENTd) Version 1.0.0.0 (HP-UX 10.20)

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Preface

The following conventions are used in this document:

Bold	Used for information that is typed, pressed, or selected in executables and instructions. For example, select connect to host .
<i>Italics</i>	Used for file names, directories, scripts, commands, user IDs, document names, and Bibliography references; and any unusual computerese the first time it is used in text.
<u>Underline</u>	Used for emphasis.
Arrows <>	Used to identify keys on the keyboard. For example <Return>.
“Quotation Marks”	Used to identify informal, computer-generated queries and reports, or coined names; and to clarify a term when it appears for the first time. For example “Data-Generation Report.”
Courier Font	Used to denote anything as it appears on the screen or command lines. For example <code>tar xvf dev/rmt/3mn</code> .
Capitalization	Used to identify keys, screen icons, screen buttons, field, and menu names.

1. Software Version Description

1.1 Scope

This Programmer's Manual (PM) contains data segment development information for the Netscape Enterprise Server Data Segment (NSENTd) for the Defense Information Infrastructure (DII) HP-based machines.

1.1.1 Identification

This section contains identification information for the NSENTd segment:

Segment Name:	NSENT Data Segment (NSENTd)
Segment Type:	DATA
Prefix:	NSENTd
Home Directory:	/h/NSENTdata
Required License:	None
Version Number:	1.0.0.0
Platform:	HP (UNIX) Workstation/HP-UX 10.20

1.1.2 System Overview

Purpose: This release of the "NSENT Data Segment" (NSENTd) allows modifications to be applied to existing Netscape Enterprise Servers and serves as a model to developers for creating additional data segments.

Usage: This release of the "NSENT Data Segment" allows users to modify the Netscape Enterprise Server configuration by simply installing the segment.

References: NSENT Data Segment (NSENTd) *Programmer's Manual*.

1.1.3 Product Information

Product Qualification The products contained in this segment have been approved for site distribution by the DII Engineering Office.

**Product
Restrictions** None.

**Product
Dependencies** The Netscape Enterprise Server (NSENT) segment and the perl (PERL) segment must be installed prior to the installation of the NSENTd.

2. Referenced Documents

The following documents are referenced in this *Programmer's Manual*:

- “*Installation Procedures - NSENT Data Segment (NSENTd)*” delivered with the NSENTd segment, version 1.0.0.0

3. Segment Overview

The “NSENT Data Segment” (NSENTd) provides developers with a functional model for creating specific data segments for the Netscape Enterprise Server. These segments may make changes to the various configuration files created during the Netscape Enterprise Server segment installation. Throughout this document, the “NSENT Data Segment” will be referred to as the “Working Model” – this will avoid confusion with any New Data Segments created for Netscape’s Enterprise Server.

Note: The successful installation of a data segment created in the manner outlined in section four requires the presence of the perl (PERL) segment.

4. Segment Development

This section outlines a general procedure for developing a data segment for the Netscape Enterprise Server using the “NSENT Data Segment” as a working model. It is recommended that you read through the remainder of this document prior to starting in order to help solidify this process.

1. Install the “NSENT Data Segment” (NSENTd) according to the *Installation Procedures* document delivered with this segment. (This installation will be referred to as the “Working Model” installation. The segment you create will be referred to as the “New Segment”)

Note: When the installation prompts, “Do you wish to apply the modifications at this time?” -- answer **NO**. This will allow the COEInstaller to proceed without affecting any local installations of the Netscape Enterprise Server. (If you inadvertently answer **YES**, the “NSENT Data Segment” will add a comment to the end of the files

```
/h/COTS/SuiteSpot/ns-home-3/https*/config/magnus.conf  
/h/COTS/SuiteSpot/ns-home-3/https*/config/obj.conf
```

stating that they have been modified. This will not change their functionality in any manner.

2. Modify the files
 /h/NSENTdata/data/magnus.conf.conf
 /h/NSENTdata/data/obj.conf.conf
 to include the changes you wish to make (according to Section 5.2 of this document)
3. Edit the file /h/NSENTdata/SegDescrip/ReleaseNotes to include relevant information concerning the new data segment.
4. Insert a blank tape into the attached tape device. Ensure that it is writeable and rewind.
5. From the directory /h/ execute the commands:

```
/h/TOOLS/DII_DEV/bin/VerifySeg -p . NSENTdata  
/h/TOOLS/DII_DEV/bin/MakeInstall -p . NSENTdata
```

- **Note:** This will create a new data segment named “NSENT Data Segment” with the SegPrefix **NSENTd** and will include the changes

you made to the `magnus.conf.conf` and `obj.conf.conf` files.

6. To test the “New Segment”, launch the COEInstaller. From the COEInstaller, you must first remove the “Working Model” installation of the “NSENT Data Segment” (NSENTd) -- this is because the “Working Model” segment and the “New Segment” have the same Segment Prefix and Segment Name. This would cause a conflict when you try to install the “New Segment”.
7. After removing the “Working Model”, you can install the “New Segment” according to the *Installation Procedures* provided with the “Working Model”.

Caution: Answering **YES** to the prompt, “Do you wish to apply the modifications at this time?” will apply the changes you specified to the current installation of the Netscape Enterprise Server.

5. Customizing Segments

5.1 Notes

None.

5.2 Modifying the *.conf.conf Files (ChangeMaker)

5.2.1 Overview

The .conf.conf files found in the /h/NSENTdata/data/ directory contain the directives responsible for modifying the .conf files found in /h/COTS/SuiteSpot/ns-home-3/https*/config/.

Note: There are two files that are primarily involved. The file /h/NSENTdata/data/magnus.conf.conf contains the directives for modifying the file /h/COTS/SuiteSpot/ns-home-3/https*/config/magnus.conf, while the file /h/NSENTdata/data/obj.conf.conf contains directives for modifying the file /h/COTS/SuiteSpot/ns-home-3/https*/config/obj.conf.

5.2.2 Syntax

“Directives”, which are statements created in the magnus.conf.conf or obj.conf.conf files, are used to initiate the changes that will take place within Netscape Enterprise Server’s magnus.conf and obj.conf respectively.

Developers should review and study the standard entries in both the magnus.conf and obj.conf files to determine which parameters they wish to configure via this Data segment.

Each directive must begin in the first column and only one directive per line is allowed. A directive may occupy the entire length of the line, but must NOT wraparound. Lines that wrap around will cause errors. There are three type of directive specifiers:

- a - which is the append directive
- r - which is the remove directive
- s - which is the search and replace directive

The format for each of these is as follows:

```
a/<regex|text>
r/<regex|text>
s/<regex|text>/text
```

where:

/ is the directive delimiter

<regex|text> is a perl regular expression or plain ASCII text

<text> is plain ASCII text

Note: While the program responsible for making the alterations supports the use of perl regular expressions, it is beyond the scope of this document to discuss them.

5.2.2.1 Delimiters

Delimiters separate the directive specifiers from the modifying text. In cases where a directive has more than one field, the delimiter is used to separate them. The delimiter may be ANY PRINTABLE character, but must NOT appear anywhere else in the directive. Examples of good delimiters are /, :, and ,

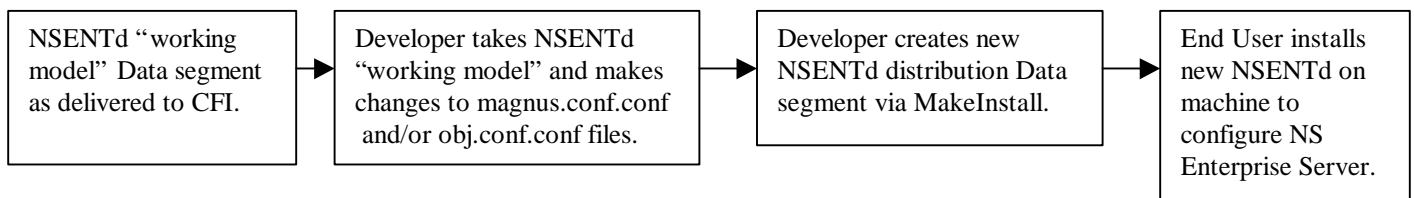
```
s:DNS on:DNS off -- delimiter is a : instead of /
```

```
s$DNS on$DNS off -- delimiter is a $
```

```
sADNS onADNS off -- delimiter is an A
```

```
sfDNS onfDNS off -- FAILS!! - "f" cannot be a delimiter since it appears
-- appears elsewhere in the directive.
```

How it Works: The example above uses the “s” directive (search and replace) to change all instances of “DNS on” to “DNS off”. This line is added to the `magnus.conf.conf` file which is designed to edit the Netscape Enterprise Server’s `magnus.conf` file during the Data segment install process. Once the line is added, a new MakeInstall is performed to create the NSENTd Data segment. This segment can be distributed to any site that the developer wishes to have the changes implemented.



NOTE: For the configuration changes to take effect, the Netscape Enterprise Server must be restarted. Restarting the Netscape Enterprise Server can be accomplished by

opening your “Netscape Server Administration” web page. First shutdown the Enterprise Server by clicking the ON/OFF switch under the “Netscape Enterprise Server 3.0” heading. “OFF” should be highlighted on the switch when this is done. Click the ON/OFF switch once again to restart the server. “ON” should be highlighted when startup is complete.

5.2.2.2 Comments (#) and WhiteSpace

The pound sign (#) denotes a comment. Comments should begin in the left most column and not exceed the length of the line. Blank lines are ignored, but whitespace on a line is significant!

```
# This is an example of a comment line      -- OK
# This would be another comment              -- OK

                                           -- OK
#And this would be a third...                -- OK

                                           -- OK
# this comment would be ok, but              -- OK
this would be wrong without                  -- WRONG!!
a #                                           -- WRONG!!
```

5.2.2.3 Appending A New Line (a/<regex|text>)

The a/<regex|text> directive is used to identify a line that is to be added to the file. The new line will become the last line of the file (appended).

Examples:

```
a/#This comment was added by the NSENT Data Segment
a/DNS off
a/User www
```

5.2.2.4 Removing A Line (r/<regex|text>)

The r/<regex|text> directive is used to identify text that is to be removed from the file.

Example:

```
r/LoadObjects obj.conf
```

CAUTION: the following line would remove ALL "e"s from the file

r/e

5.2.2.5 Search and Replace (s/<regex|text>/<regex|text>)

The s/<regex|text>/<regex|text> directive is used to identify text that is to be replaced and the replacement text respectively.

Example:

```
# The following line replaces all occurrences  
# of "DNS off" with "DNS on"  
s/DNS off/DNS on
```

5.3 Backing Up and Restoring Original Configuration Files

The developer should make certain to create backups of the original files during the PostInstall process and to restore them during the DEINSTALL process. The NSENT Data Segment's PostInstall and DEINSTALL are originally equipped for backing-up and restoring the files:

```
/h/COTS/SuiteSpot/ns-home-3/https*/configs/magnus.conf
```

and

```
/h/COTS/SuiteSpot/ns-home-3/https*/configs/obj.conf .
```

The backups should be stored locally to the "NSENT Data Segment's data directory in the installation directory, NSENTdata/data/ .

6. Notes

None.

